

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in this application.

Listing of Claims:

1. (Withdrawn, Currently amended) A composite article comprising a metal reinforcing element and molded plastic coating firmly attached thereto, wherein said reinforcing element is formed to define an open channel having a longitudinal axis and an open side of the channel extending parallel to said axis, and said plastic coating includes a portion formed as a wall mechanically closing said open side of the channel,

wherein said plastic coating forms ribs along at least a portion of an inner side of the channel of the reinforcing element at the open side of the channel.

2. (Withdrawn) The composite article according to Claim 1, wherein the form of said open channel allows insertion of a mold core snugly fitting said reinforcing element, the insertion being through said open side, in the absence of said plastic coating.

3. (Withdrawn) The composite article according to Claim 2, wherein said reinforcing element has two side walls and a transverse wall connecting said side walls.

4. (Withdrawn) The composite article according to Claim 2, wherein said reinforcing element has a profile shaped as a truncated oval.

5. (Withdrawn) The composite article according to Claim 2, wherein said reinforcing element comprises two walls connected along a common edge.
6. (Withdrawn) The composite article according to Claim 1, wherein said metal reinforcing element has openings for providing better adhesion with said plastic coating.
7. (Withdrawn) The composite article according to Claim 6, wherein said openings are through-going and said plastic coating has protrusions with swollen heads at the inner side of the channel, obtained through said openings.
8. (Withdrawn) The composite article according to Claim 1, wherein said metal reinforcing element is made of one of the following: bent sheet metal, extruded metal profile, rolled metal profile.
9. (Withdrawn) The composite article according to Claim 1, wherein said plastic coating has closed tubular form embracing said metal reinforcing element.
10. (Withdrawn) The composite article according to Claim 1, wherein said plastic coating has a form including a second channel with open profile having two free edges, said two free edges being fixed to two respective edges of the open channel of said metal reinforcing element.

11. (Withdrawn) The composite article according to Claim 1, wherein said metal reinforcing element is formed to define a plurality of open channels each of them being mechanically closed by a wall which is a portion of said plastic coating.

12. (Withdrawn) The composite article according to Claim 1, wherein said metal reinforcing element is formed to define a plurality of open channels, some of them being mechanically closed by a wall which is a portion of said plastic coating, so as to allow bending of said composite article along the rest open channels.

13. (Withdrawn) The composite article according to Claim 1, wherein said plastic coating has a portion at least partially covering said metal reinforcing element at the inner side of said channel.

14. (Withdrawn) The composite article according to Claim 1, wherein the closing wall formed by said plastic coating has at least one opening.

15. (Withdrawn) The composite article according to Claim 1, wherein said plastic coating has at least one opening located so as to expose a portion of said metal reinforcing element.

16. (Withdrawn) The composite article according to Claim 1, having at one end thereof an extension of said injection-molded plastic coating with external shape allowing tight insertion of said extension into the channel of a similar composite article, in the direction of said channel axis.

17. (Withdrawn) The composite article according to Claim 1, wherein said plastic coating is at least one of the following materials:

thermoplastic, polymerizing resin, polypropylene, polyacetal, polystyrene.

18. (Withdrawn) A constructive element comprising at least two composite articles as described in Claim 1, said articles being connected by plastic elements integrally formed from the same injection-molded plastic as said composite articles.

19. (Withdrawn) The constructive element of Claim 18, wherein said at least two composite articles are co-planar elongated beams.

20. (Withdrawn) The constructive element of Claim 19, wherein said elongated beams are parallel and said plastic elements are transverse beams.

21. (Withdrawn) The constructive element of Claim 19, wherein said plastic elements are channel-shaped beams with open profiles.

22. (Withdrawn) The constructive element of Claim 21, wherein said open profiles have an open side oriented in one direction.

23. (Withdrawn) The constructive element of Claim 22, wherein the metal reinforcing elements of said elongated beams are oriented with their open side in the same direction as the open profiles of said channel-shaped beams.

24. (Currently amended) Manufacturing a composite article comprising a metal reinforcing element and molded plastic coating firmly attached thereto, wherein the reinforcing element is formed to define an open channel having a longitudinal axis and an open side parallel to the axis, and the plastic coating includes a portion formed as a wall mechanically closing the open side of the channel, where the form of the metal reinforcing element allows insertion, via the open side of the channel, of a mold core which is configured to provide mechanical stability to the reinforcing element, the manufacturing comprising:

- providing the metal reinforcing element;
- providing the mold core;
- providing a mold comprising at least two parts formed to define a mold cavity therebetween when the mold is assembled, the mold being adapted to accommodate the metal reinforcing element fixedly in the mold cavity, allowing space for the plastic coating;
- inserting the mold core in the metal reinforcing element via the open side, so that the mold core provides mechanical support to the element;
- assembling the mold parts and the metal reinforcing element with the inserted core therein so as to fix the reinforcing element in the mold cavity;
- injecting flowable and settable plastic coating into the space to form the composite article;
- releasing the obtained article including the reinforcing element, the set plastic coating and the mold core, by disassembling the mold; and
- removing the entire mold core from the article in a direction along the channel axis.

25. (Previously presented) The manufacturing of the composite article according to Claim 24, wherein the assembling of the mold parts and the metal reinforcing element is done by relative motion thereof transverse to the channel axis.

26. (Previously presented) The manufacturing of the composite article according to Claim 24, wherein the mold parts have a plurality of protrusions adapted to abut the metal reinforcing element when the mold is assembled, thereby fixing the reinforcing element in the mold cavity.

27. (Previously amended) The manufacturing of the composite article according to Claim 26, wherein at least part of the protrusions have rounded edges so as to form in the plastic coating decorative windows visibly exposing the surface of the metal reinforcing element.

28. (Previously presented) The manufacturing of the composite article according to Claim 24, wherein the reinforcing element has openings and the injected plastic coating fills them.

29. (Previously amended) The manufacturing of the composite article according to Claim 28, wherein the mold core has recesses which are located opposite the openings when the mold core is inserted in the reinforcing element, so that the injected plastic coating can form protrusions obtained through the openings, the protrusions having swollen heads at the inner side of the channel.

30. (Previously presented) The manufacturing of the composite article according to Claim 24, wherein the mold core is assembled from at least two parts divided along the channel so as to facilitate the removing of the core in a direction parallel to the channel axis.
31. (Canceled)
32. (Previously amended) The manufacturing of the composite article according to Claim 24, wherein the plastic coating is 2-3mm thick.
33. (New) The manufacturing of the composite article according to Claim 24, wherein the final step includes completely removing the entire mold core from the article.
34. (New) The manufacturing of the composite according to Claim 24, wherein the mold core is slidingly removed.
35. (New) The manufacturing of the composite according to Claim 24, wherein, during removal of said mold core from the article, said plastic coating remains substantially undamaged.
36. (New) The manufacturing of the composite article according to Claim 24, wherein removal of said mold core from the article does not impact any substantially damage to the coating.

37. (New) The manufacturing of the composite article according to Claim 24, wherein, in cross-section of the composite article taken perpendicular to the longitudinal axis, said coating forms a closed contour encompassing the reinforcing element.

38. (New) The manufacturing of the composite article according to Claim 37, wherein, during removal of said mold core from the article, said contour remains closed.

39. (New) The manufacturing of the composite article according to Claim 37, wherein, during injection, said mold core prevents the settable plastic from filling said channel.

40. (New) The composite article according to Claim 1, wherein in cross-section perpendicular to the longitudinal axis, said reinforcing element has a first side wall portion with an inner surface, an opposing outer surface and a first end point, and a second side wall with an inner surface, an opposing outer surface and a second end point, the inner surfaces of the side walls defining said channel and said first and second end point defining therebetween said open side of the channel, wherein said molded plastic coating has a u-shaped portion coating at least one of said first and of said second end point.

41. (New) The composite article according to Claim 1, wherein at least in one cross-section taken perpendicular to said longitudinal axis, said plastic coating continuously confines said reinforcing element and includes a first portion mechanically closing said open side of the channel, a second portion coating said outer surface, and at least one projection partially extending from said first portion along said inner surface into said channel.

42. (New) The composite article according to Claim 1, wherein the majority of said inner surface of said channel is free of said molded plastic coating.

43. (New) A composite article comprising a metal reinforcing element and molded plastic coating firmly attached thereto, said reinforcing element being formed with an open channel having a longitudinal axis and an open side extending parallel to said longitudinal axis, said channel having an inner surface facing said channel and an opposing outer surface, wherein at least in one cross-section taken perpendicular to said longitudinal axis, said plastic coating continuously confines said reinforcing element and includes a first portion mechanically closing said open side of the channel, a second portion coating said outer surface and at least one projection partially extending from said first portion along said inner surface into said channel.

44. (New) The composite article according to Claim 42, wherein the majority of said inner surface of said channel is free of said molded plastic coating.